

WHAT IS CLAIMED IS:

1. A method of preparing fiber stock for the production of paper or board, comprising the steps of:
 - supplying fibers in the form of a fiber suspension that has a predetermined solids content;
 - loading said fibers with a precipitation product, without refining the fiber stock;
 - 5 refining said fibers after said loading step, whereby said refining step at least one of improves a freeness value and alters characteristics of said fibers; and
 - transporting of the fiber stock in a direction toward a paper machine.
2. The method of claim 1, wherein said predetermined solids content is in the range of approximately 25% to approximately 40%.
3. The method of claim 2, wherein said predetermined solids content is in the range of approximately 30% to approximately 40%.
4. The method of claim 3, wherein said predetermined solids content is in the range of approximately 30% to approximately 35%.
5. The method of claim 1, wherein said precipitation product is a filler.
6. The method of claim 1, further comprising the step of diluting said fiber suspension prior to said refining step.

7. The method of claim 6, wherein said diluting step results in a change of the solids concentration to be in a range of approximately 3% to approximately 7%, said solids concentration defined as the fiber and precipitation product mass, specific to the total volume.

8. The method of claim 7, wherein said solids concentration is in the range of approximately 4% to approximately 6%.

9. The method of claim 8, wherein said solids concentration is in the range of approximately 4.5% to approximately 5.5%.

10. The method of claim 1, wherein said refining step is repeated.

11. The method of claim 10, wherein said predetermined solids content during a first execution of said refining step is different than said predetermined solids content in a subsequent execution of said refining step.

12. The method of claim 10, wherein said predetermined solids content during a first execution of said refining step is the same as said predetermined solids content in a subsequent execution of said refining step.

13. The method of claim 1, further comprising the step of partially refining said fiber suspension prior to said loading step.

14. The method of claim 13, wherein said partially refining step is completed using no more than one half of the total refining energy expended in said partially refining step and said refining step.

15. The method of claim 1, further comprising the step of washing said precipitation product from said fiber suspension after said refining step.

16. The method of claim 1, wherein said fiber suspension is refined in at least one refiner having a refining slot, said refining slot having structured surfaces, said fibers present in said refining slot being refined with an edge load of said surface structures in a range of approximately 0.5 J/m to approximately 5.0 J/m.

17. The method of claim 16, wherein said edge load of said surface structures is in a range of approximately 0.5 J/m to approximately 2.0 J/m.

18. The method of claim 17, wherein said edge load of said surface structures is approximately 1.5 J/m.

19. The method of claim 16, wherein said structured surfaces include a plurality of intersecting angles between knife fillings, said plurality of intersecting angles being in the range of approximately 10° to approximately 80°.

20. The method of claim 19, wherein said plurality of intersecting angles are in the range of approximately 40° to approximately 60°.

21. The method of claim 20, wherein said plurality of intersecting angles are approximately 40° if said fibers are short.

22. The method of claim 21, wherein said plurality of intersecting angles are approximately 60° if said fibers are long.